

Applicant's previous submission identified the claims as "canceled", "amended" or "rejected" solely for the convenience of the Examiner. Accordingly, in view of the requirements noted the Notice of Non-Compliant Amendment dated 7 January 2004, this submission deletes the previous recitation of the claims as they currently stand and respectfully requests reconsideration of the Examiner's currently outstanding rejections as follows.

REMARKS

This is in response to the non-final Official Action currently outstanding with respect to the above-identified application.

The present application was originally filed with Claims 1 - 7. By the previous Amendment, Claims 2 - 3 and 5 - 7 were amended; Claims 1 and 4 were canceled, without prejudice; and New Claims 8 and 9 were added. Accordingly, Claims 2, 3 and 5 - 9 constitute the claims under active prosecution in this application.

Claims 2 and 7 are currently rejected and Claims 3, 5, 6, 8 and 9 are currently allowed. For convenience of reference, the status of all of the claims and the current text of all of the presently pending claims are set forth above.

In the currently outstanding Official Action, the Examiner has:

1. Acknowledged Applicant's claim for foreign priority under 35 USC 119(a)-(d) or (f), and confirmed the receipt by the United States Patent and Trademark Office of the required certified copy of the priority document;

2. Provided Applicant with a copy of a Form PTO-892 (Notice of References Cited) and copies of each of the newly cited references listed therein;
3. Confirmed that the drawings originally filed with this application on 29 December 1999 have been accepted as formal drawings;
4. Provided Applicant with a copy of the Form PTO-1449 that accompanied its Information Disclosure Statement of July 10, 2003, duly signed, dated and initialed by the Examiner in confirmation of his consideration of the art listed therein;
5. Withdrawn his prior objection under 35 USC 132, rejections of Claims 3 and 9 under 35 USC 112, objection to Claim 8 under 37 CFR 1.75 and other formal objections to the wording of this application;
6. Rejected Claims 2 and 7 under 35 USC 103(a) as being unpatentable in view of a first Koerich, et al reference ("A System for Automatic Extraction of the User-Entered Data from Bankchecks", Proc. SIBGRAPI '98, Int. Symp. On Computer Graphics, Image Processing and Vision, October 20, 1998, pp. 270-277) hereinafter "Koerich 1" in view of a second Koerich, et al reference () hereinafter "Koerich 2"; and
7. Allowed Claims 3, 5, 6, 8 and 9.

Further comment regarding items 1-5 and 7 above is deemed not to be necessary in these Remarks.

With respect to item 6 above, the Examiner's rejection of Claims 2 and 7 as being unpatentable under 35 USC 103(a) over the Koerich 1 reference in view of the Koerich 2 reference, Applicant respectfully ***traverses the Examiner's rejection and requests reconsideration.***

Applicant in response to the previous Official Action in this application noted that the Examiner himself has admitted that the Koerich 1 reference fails to disclose that the original (reference) image stored in the storage means is inputted via the input means (scanner). The Examiner asserted, however, that since the database is disclosed as storing images, it would have been obvious to one of ordinary skill in the art at the time the present invention was made to utilize the scanner already present as a means for inputting the original (reference) image as well as the images that are subsequently to be subjected to comparison.

Applicant indicated that this initially seemed to be a subjectively appealing argument, but noted that upon further consideration, it should be realized that the Examiner's argument totally failed to acknowledge the fact that the database of the Koerich 1 reference also includes parameters and data that interact with the image data (no matter how that image data was created) in the computer so as to create a virtual "template" as the reference image.

Thus, Applicant asserted that the Koerich 1 and similar references do not contemplate that a reference image will be input and stored as herein claimed for subsequent comparison to other images. Instead, the Koerich and similar references contemplate that for each document from which extraction of so-called user entered data is to take place some sort of a "virtual template" will be generated (presumably by a computer) that is specific to the peculiarities of document under consideration, i.e., in Koerich 1 checks issued by each issuing bank and the peculiarities associated with the check's issuing payor.

Further, the computer program is contemplated by Koerich 1 to automatically compensate for positional shifts between the template's spacial disposition and spacial disposition of a specific check image input's disposition relative to one another. The result, therefore, is that the initial algorithm produces from the document under analysis a "virtual template" including five spacially aligned sub-image fields for further analysis, namely, the digit amount, the worded amount, the payee's name, the place and date, and the signature.

It was Applicant's position, therefore, that the conclusion is inescapable that the Koerich 1 reference and those similar to it do not teach or disclose the present invention, and that they would not have suggested the present invention to a person of ordinary skill in the art at the time that the present invention was made. None of those references start with the simple scan and store of a basic initial image. Instead, they all are concerned with the creation of so-called "templates" free from printing distortion and other non-user-entered material to which comparisons of filled out forms can be made. Accordingly, it was Applicant's contention that those references teach away from making direct comparisons between images that are input and stored with subsequently input images as herein claimed.

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Stated slightly differently, the Koerich 1 reference teaches the artificial creation (generation) of "idealized" virtual stored images to which numerous actual individual input documents may be sequentially compared to extract particular types of data rather than all data satisfying a preselected criteria. This clearly is not the same thing as the present invention wherein each input image after the first is compared with all of the input images that have gone before it in the generation of a composite comparison output. Consequently, it was Applicant's position that a system for comparing individual input documents individually to a computer generated, "virtual template" is simply not the same thing, nor does it render obvious, a system in which images are effectively cumulatively compared with one another in the derivation of a final output result.

If stored background patterns in Koerich 1 are "virtual templates" then Applicant is correct and rejection should be withdrawn.

In response to the foregoing argument, the Examiner now combines the Koerich 1 reference with the Koerich 2 reference.

The newly cited Koerich 2 reference, unlike the Koerich 1 reference, discloses the step of comparing an image of the background of the bankcheck of interest stored in memory with an input image of that check such that the entire background of the input check may be removed by a subtraction operation. Further, in the Koerich 2 reference, the background removal is accomplished **before** the system initiates the steps of the template formation procedure and the removal of baselines and printed characters from the virtual image of the input check with its background removed.

As noted above, Koerich 1 does not disclose either the output of the virtual image of the input check with its background removed or the threshold limitation present in the comparing step of presently pending Claims 2 and 7. The Examiner attempts to avoid these deficiencies of Koerich 1 by arguing that it would have been obvious to a person of ordinary skill in the art to adopt the improved subtraction/comparison utilizing a threshold concept of Koerich 2 for the removal of the background from the template fields in Koerich 1.

The Examiner, however, fails to recognize that no actual output is provided for the virtual result of the comparison of the stored background image with the input check image in either of the cited references. In other words, in the Koerich 2 reference the result of the comparison of the stored background image and the input check image is an image (data set) virtually present within the compute is subjected to template application to define fields of interest, baseline removal and printed character elimination prior to its final output. The Koerich 1 article, on the other hand, applies the template prior to background removal such that a virtual image of the entire check with the background removed apparently is never present.

Hence, it will be seen that despite the Examiner's suggestion that the flow diagram of Figure 4 of Koerich 2 shows the output of the image resulting from the comparison of the stored and input images, Applicant has been able to locate no specific disclosure or suggestion within the "four corners" of either of the Koerich references that an intermediate virtual image can (or should) be output. In other words, the purpose of both of the Koerich references is to separate user entered data from the other image data of a bankcheck as a usable output. It is irrelevant to the desired Koerich result whether the background is removed first followed by template formation for the removal of other extraneous image information or vice versa. In either case, both the background and the other extraneous data must be removed before the desired output is present within the computer. Applicant respectfully submits that this is not the same thing and that it does not teach, disclose or suggest the inventions of either Claim 2 or Claim 7 of the present invention (that specifically provide means for the output of the result generated by the comparison means) to one of ordinary skill in the art at the time that the present invention was made. Neither reference discloses or suggests such a means, and neither reference suggests that such a physical output (as opposed to a virtual data set for further processing within the processor) would be either necessary or desirable in the method being discussed.

if it outputs,
even meets
claim language

For each and all of the foregoing reasons, Applicants respectfully submit that all of the claims currently pending in this application (i.e., Claims 2-3 and 5-9) now are in condition for allowance. Accordingly, reconsideration and allowance of the present application in response to this communication are respectfully requested.

Applicants believe that additional fees are not required in connection with the consideration of this response to the currently outstanding Official Action. However, if for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, you are hereby authorized and requested to charge and/or credit Deposit Account No. **04-1105**, as necessary, for the correct payment of all fees which may be due in connection with the filing and consideration of this communication.

Respectfully submitted,

Date: January 15, 2004

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